

Case Study

# Kheti Virasat Mission: Promotion of organic farming in Punjab

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## **Governance Knowledge Centre**

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## Executive Summary

While Green Revolution has brought prosperity on one hand, it has caused tremendous damage to our ecology and health. The mechanisation of agriculture has pushed most of the farmers into a debt trap that leads to exodus, displacement and increasing rate of suicides among farmers. The increasing use of chemicals is also detrimentally effecting soil fertility and causing environmental degradation. Keeping these concerns in mind, it is crucial to adopt sustainable agricultural practices.

Kheti Virasat Mission (KVM) in Punjab seeks to revive the farming community in the state by sustainable agricultural practices like natural farming, inter cropping system, seeds conservation and chemical free kitchen gardening. KVM also facilitates the cultivation and use of millet based food to promote traditional and healthy food habits. KVM conducts workshops, seminars, farmer field schools and participatory resource appraisals to educate, sensitize, and train farmers on these environmental friendly and productive agricultural practices.

KVM has established a pool of about 100 local resource persons all around the state to work on and spread awareness on different environmental, agricultural and health issues among farming communities. In the last 6 years more than 4,000 village level awareness meetings and farmer field workshops have been organized across the state to train farmers and their families. More than 15,000 farmers have participated in these workshops and meetings. At present, more than 2,500 farmers are practicing natural farming in association with KVM. KVM has successfully led number of campaigns against chemical farming, use of pesticides, straw burning in order to create awareness among masses for promotion of natural farming.

KVM is equally active in advocating for a policy frame work for natural farming. It has submitted a 'Green Agenda for Sustainable Punjab' to the Government of Punjab on 7 October 2012 to address the issue of environmental crisis and sustainable agriculture.

## Methodology

The Governance Knowledge Centre (GKC) team conducts extensive research to identify initiatives that contribute towards improving the nature and delivery of crucial public services in the country. Kheti Virasat Mission (KVM) may be considered as a unique and important initiative for promoting the adoption of sustainable agriculture practices among the farming communities in Punjab.

In order to understand the initiative, the GKC team conducted thorough secondary research using web resources followed by a detailed telephonic interview with the Executive Director of

Kheti Virasat Mission (KVM), Umendra Dutt; field coordinator for promoting chemical free kitchen gardening, Amanjot Kaur and field coordinator for natural farming, Gurdeep Singh. The interview included questions on the objectives behind the initiatives, programme design, implementation, training and capacity building, funding and impact of the programme. The challenges in implementation and the sustainability of the programme were also discussed. The research team also interacted with a beneficiary from Punjab to understand the impact of KVM activities.

## Background

According to the Food and Agriculture Organization (FAO), sustainable agriculture "is the successful management of resources for agriculture to satisfy changing human needs while maintaining or enhancing the quality of environment and conserving natural resources"<sup>1</sup>. Sustainable agriculture aims to maintain an agriculture growth rate to meet the demand for food of all living things without draining the basic resources. Organic farming is one of the several approaches to achieve the objective of sustainable agriculture and consequently sustainable development. Modern agriculture practices based upon the use of chemical fertilizers, pesticides, have an adverse impact on our environment, soil fertility and health. Therefore, it is crucial to promote sustainable agricultural practices, especially in a developing country like India where more than 70 per cent of the population relies on agriculture and related occupations as a major source of income.

Though the Government of India has taken some steps to promote organic agriculture in India, however there is a lack of advocacy efforts at the policy level.

Against this backdrop Kheti Virasat Mission started its movement of natural farming, conservation of natural resources and traditional wisdom on agriculture in Punjab, in 1997. It was established as a Non-Government Organization (NGO) in 2000, and registered as a trust in 2005. Over time, KVM has become a civil-society movement for enhancing ecological sustainability, environmental health and the provision of safe food and livelihoods for those who are socially and economically marginalized through the adoption of sustainable agricultural practices like natural farming, inter cropping system, seeds conservation and chemical free kitchen gardening.

Most of the farmers associated with KVM initiate natural farming alone or in phased manner. Currently KVM has around 100 formal and 800 informal members. KVM has spread

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<sup>1</sup> Narayan, S. 'Organic farming in India: Relevance, Problems and Constraints' Department of Economic Analysis and Research, National Bank for Agriculture and Rural Development, Mumbai 2005. Web: 1 October 2012 <<http://www.nabard.org/fileupload/databank/occasionalpapers/oc%2038.pdf>

its activities all over Punjab covering regions like Doaba (Jalandhar, Hoshiarpur, Nawanshahar, Kapurthala Districts), Paudh (Patiala, Fatehgarh Sahib, Ropar, Mohali, Chandigarh), Malwa East (Sangrur, Barnala, Ludhiana), Malwa West (Ferozepur, Fazilka, Faridkot, Moga), and Malwa South (Bathinda, Muktsar, Mansa).

## Objective

Kheti Virasat Mission aims to promote sustainable agricultural practices in Punjab for:

- Protecting the region's ecological system through reduction of environmental degradation.
- Enhancing the socio-economic status of farmers and their families
- Providing livelihood opportunities for poor and marginalized sections of society by promoting inclusive development
- Protecting the consumers' right to safe and healthy food.

## Programme Design

### Key Stakeholders

**Farmers and their families:** Farmers and their families are the key beneficiaries of KVM. The practice of organic farming has enabled them to reduce the cost of farming, increase their land fertility and agricultural productivity.

**Women in Punjab:** Women have a voice in decision making through KVM chemical free kitchen gardening. They also promote the organic farming in their families, the concept of seed conservation and the related benefits.

**Consumers:** Consumers are the indirect beneficiaries of KVM as this initiative also protects their right to have safe and healthy food.

Training, extension services, promotional activities, advocacy and campaigns are other major components of KVM. In this regard varied stakeholders are associated with it such as environmental health action groups, religious leaders, Panchayati Raj institutions, self-help groups, physicians, agriculture experts, economists, environmentalists, heritage conservationists, advocates, experts of life sciences, academicians, literary and creative artists, poets, writers, singers, thinkers and community leaders.

## Workflow

### Promotion of Sustainable Agricultural Practices

KVM promotes natural farming, seeds cultivation, chemical free kitchen gardening and inter cropping system of agriculture to revive soil health, agriculture productivity and the socio-economic status of farmers in Punjab.

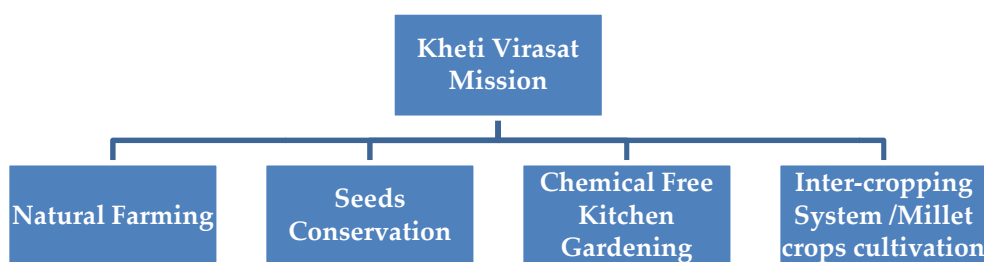


Figure 1: Sustainable agricultural techniques promoted by KVM

Source: OneWorld Foundation India, 2012

**Natural Farming:** KVM promotes natural farming across Punjab through workshops, seminars, farmer field schools and participatory resource appraisals.

Natural farming is cost effective and input efficient. It is based upon the concept of maintaining microbial equilibrium of the soil. The more microbial equilibrium the soil has, the more nutrition it receives from surroundings and natural life processes. Thus the farmers prepare a mixture Jeevaamitra by mixing cow urine and cow dung with gram flour, jaggery, and mud and add it to the soil to revive microbial activity.

Under natural farming, mulching is also carried out wherein a layer of material (bark chips etc.) is applied to the surface of an area of soil. If soil mulched, it protects all the soil bacteria, microbes and earthworms. Besides protecting the bacteria and retaining the moisture, mulching also keeps the temperature of soil low so as to maintain the survival of microbes.

Generally natural farming itself serves as a preventive mechanism from pest infection. Certain beneficial insects and organisms' keep the pests under control and the farmers rely on this traditional wisdom for pest management. Some specific trees like Neem, Amrudh, Kikar etc. serve as natural pesticides. If in case, any pest infections happen, cow's urine based chemical

free pesticides are prepared i.e. by boiling the leaves of Neem or other medicinal plants with cow's urine and sprayed on the crops to control pests.

**Seeds Conservation:** KVM seeks to revive the local traditional seed varieties, and actively promotes their production. It trains the farmers to conserve their own seeds and then use those seeds for farming. Farmers also have access to indigenous seeds from different states of the country like Andhra Pradesh, Maharashtra, Uttar Pradesh, Himachal Pradesh etc.

During green revolution, there was more emphasis on genetically modified crops which do not support seed storage for future use. Under such a system, every year farmers have to purchase high priced seeds from seed manufacturing companies. Under natural farming, the process of seed conservation is more feasible. A farmer can conserve seeds every year, and share it with other community members who initiate the practice of natural farming facilitating spreading awareness and interest in natural farming among other farmers in the community.

**Chemical free kitchen gardening:** KVM has established the Women Action for Ecology group to promote chemical free farming at a large scale, and also works towards motivating rural women to adopt the practice in their kitchen gardens at the household level. "Feed your children with poison free safe food" is the slogan of KVM's campaign. The objective is to make their kitchens poison-free by growing food free from pesticides and other agro-chemicals. Through this campaign, KVM empowers women by motivating them to start their own kitchen gardens to grow seasonal vegetables organically. It also ensures safe food for or consumers, specifically our children, the future generation of the county.

Nearly 50 women in each of the 10 villages in the project area are engaged in chemical free kitchen gardening. Out of these 10 villages, 4 have completed a year and the remaining have initiated the process recently. Thus, today more than 400 women are in chemical free kitchen gardening in Faridkot, Bhatinda and Barnala districts of Punjab.

**Intercropping System:** KVM also promotes the agricultural technique of intercropping. Intercropping system refers to multi cropping pattern, a traditional wisdom based approach to maintain the nutritive value of the soil. This enables farmers to increase the soil fertility and diversify crop yields. Multi cropping pattern leads to symbiotic relationship of crops to sustain nutrition and fertility. Such a dichotic arrangement attracts beneficiary insects and worms which serve the function of pest repellent too.

KVM also facilitate the cultivation and use of millet based food because of their high nutrient value.

## **Training and Capacity Building**

KVM organizes regular workshops and trainings on natural farming practices conservation of seeds, inter cropping farming system, millets based farming system, non-pesticide management and chemical-free kitchen gardening.

KVM has been able to establishing a pool of about 100 local resource persons all around the state to work on different environmental, agricultural and health issues. The major criteria for selecting the resource persons are good communication skills, teaching aptitude, confidence and strong knowledge base on natural farming and related issues.

### Training for natural farming

Initially meetings are organised at local level with farmers to have an interactive discussion on organic farming and its benefits. After 2 or 3 meetings, KVM identifies those who are willing to opt for organic/natural farming. The first training workshop is conducted to orient the farmers towards natural farming and how to make farming cost effective. Initially they keep some area of their land under natural farming for experimentation and some under chemical farming. Once they witness the tremendous impact of natural farming they scale up the practice on their entire field. Majority of the marginal/small/medium sized farmers have adopted natural farming at a large scale. As far as big farmers, specifically Zamindars are concerned the practice is being adopted at an experimental level.

### Training for chemical free kitchen gardening

For chemical free kitchen gardening, trainings programmes are organised in the village field schools every week.

The Women Action for Ecology group makes regular visits to the villages and interacts with women for the promotion and enhancement of chemical free kitchen gardening. Women undergo extensive and regular trainings to adopt this practice. These programmes are organized thrice in a year-at the time of germination, secondly during the plant growth phase and lastly at the time of their maturation so as to elaborate the processes and precautions at each stage of gardening.

Women are made aware of the natural pest management strategy and trained to distinguish between friendly and non-friendly pests. They are also trained to prepare cow's urine based organic pesticides for use in exceptional cases.

In the last 6 years, more than 4,000 village level awareness meetings and farmer field workshop have been organized across the state to train the farmers and their families. More than 15,000 farmers have participated in these workshops and meetings. At present, more than 2,500



farmers are practicing natural farming in association with KVM. These farmers have adopted various natural methods of soil nutrition management, pest management, crop management and water management. The natural farming experts associated with KVM also update beginner natural farmers with the latest technological information and new farming practices.

KVM's field coordinators or community resource persons are in regular interaction with the farmers practicing natural farming or women in chemical free kitchen gardening at the grassroots level so as to monitor and evaluate the trend and usage of natural farming.

### **Awareness Generation**

In 1997, KVM attempted to study agricultural practices in Punjab and their impact on the environment and people's health. A number of baseline surveys were conducted to assess agricultural practices and gauge farmers' awareness about techniques like natural farming. During this time, majority of the farmers were following chemical farming techniques and were apprehensive about natural farming with respect to its cost effectiveness, yield rate, water consumption etc.

To aware people about various organic farming techniques, KVM undertakes research work on various issues concerned with organic farming and highlights the impact of chemical farming on the environment and human health through the random selection of study areas. KVM also shares field findings with farmers and the community members through various community meetings and discussions.

Such research and experience sharing is an ongoing activity of the KVM.

### **Advocacy and Campaigns**

KVM organises a number of food festivals like 'Bebe Di Rasoi' and 'Nav-Trinjan' to promote the usage of organic food. These food festivals were started in 2008 and till date nearly 25-30 such festivals have been organised.

KVM has led a number of campaigns against chemical farming, use of pesticides, straw burning in order to create awareness among masses for promotion of natural farming, use of chemical free manures and pesticides so as to maintain the health of the ecological system, and enhance agricultural productivity.

KVM has also successfully led campaigns against Genetically Modified (GM) food popularly known as "I am no Lab Rat" in Punjab and Chandigarh

KVM publishes 'Balihari Kudrat' in Punjabi to impart knowledge about agricultural practices, current issues about environment, agriculture and health. More than 2000 farmers have subscribed to the magazine.

KVM has also prepared a Green Agenda to address the issue of environmental crisis and sustainable agriculture and development in Punjab. It is a vision document for sustainable Punjab suggesting the need for ecological audit and the setting up the Punjab Environment Commissions and Punjab Environment Fund. It also recommends a comprehensive programme for ecological revival to provide natural manure. This agenda is a suggestive outline for building a partnership between government and people for crisis mitigation<sup>2</sup>.

KVM has published number of books to promote natural farming, organic kitchen gardening, practice of traditional food habits etc. like Bebe Di Rasoi, Ghrelu Bagichi, Gian Di Potli, Kudrati Kheti Ik Saral Vigyan etc.<sup>3</sup>

## Funding

KVM receives funding from Toxic Link, CSE (Centre for Science and Environment), CSA-Centre for Sustainable Agriculture and donations. Its annual expenditure is INR 10 lakh covering expenditures like advocacy and Campaigning (40 per cent), action programmes (20 per cent), workshops/seminars (20 per cent), the salary payments (10 per cent) and publications (10 per cent).

## **Impact**

The natural farming techniques promoted by KVM have the following advantages:

**Improved yield rate and conservation of natural resources:** Natural farming has improved the yield rate of many crops which may be attributed to the reduced need for buying and using external chemical inputs resulting in greater net incomes. It has also reduced the consumption of water on fields by around 50%.

**Improved rate of soil nutrition:** Natural farming enables a farmer to maintain the survival of micro-organisms in the soil for creating microbial equilibrium. The greater microbial equilibrium the soil has, the more nutrition it receives from surroundings and natural life processes.

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<sup>2</sup> 'Green agenda for sustainable Punjab' 7 October 2011 Web: 11 October 2012  
<<http://umendradutt.blogspot.in/2011/10/green-agenda-for-sustainable-punjab.html>>

<sup>3</sup> Ecological farming in Punjab: Issues, strategies and way forward Web: 11 October 2012  
<<http://www.khetivirasatmission.org/articles--publications.html>>

**Protection of consumer's rights to have safe and healthy food:** Natural farming provides consumers with chemical free, healthy and nutritious food. **Enhancement of the socio-economic status of the farming community:** KVM's initiative has enhanced the socio-economic status of the farming community by increasing yield rate and agricultural productivity. It has also reduced the debt burden of farmers in Punjab.

**Organization of farmers into collectives:** KVM has organized the farmers into knowledge sharing collectives who work together on natural farming and collectively yield the benefits of sustainable agricultural practices.

**Participation of women in decision making:** KVM's Women Action for Ecology has developed a forum for women's participation in agro-ecological revival movement in Punjab enabling them to earn an income of their own and contribute in the promotion of an organic farming culture.

Along with promoting natural farming techniques across fields in Punjab, KVM has successfully led a number of campaigns to promote the benefits of organic farming at the policy level. These campaigns include:

- The "I am no Lab Rat" campaign to protest against the use of Genetically Modified crops.
- Campaign for elimination of pesticides and environmental health – 2005, 2006, 2007, 2008, 2009
- Campaign against Globalization ,2005
- Jal Yatra and Water Literacy Campaign on issue of water in Faridkot, Muktsar, Bathinda, Mansa and Sangrur districts.
- A campaign for subsidizing ecological fertilizers in collaboration with Greenpeace 2010

In this manner, KVM's approach has brought a tremendous change in the farming culture in Punjab.

## Challenges in Implementation

**Farmers' apprehensions on natural farming:** Farmers are generally apprehensive about natural farming and its impact on agricultural productivity and their income. To address farmer's apprehension, KVM conducts number of awareness programmes and advocacy campaigns for educating them on natural farming techniques. It also conducts number of

surveys comparing the effects of chemical farming verses natural farming and shares the findings at grassroots level so as to familiarize the farming community about the advantages of natural farming.

**Convincing big landlords:** It is easier to convince small/marginal or medium farmers to replace chemical farming practices with organic farming. However, big farmers/landlords who generally give their land on contract adopt the practice of natural farming only on an experimental basis allotting a small part of their land for the purpose. It is extremely challenging to convince them to replace the use of chemical farming techniques in large sections of their land.

**Insufficient finances:** KVM manages its action programmes, advocacy and campaigns etc. with a meagre funding from private organisations like Toxic Link, CSE etc. There is no major financial support from any government organization which is a major challenge for KVM.

**Limited success in advocacy efforts:** Addressing the issue of natural farming at policy level has not yet yielded any definitive outcomes. KVM had submitted a proposal ‘Green Agenda for Sustainable Punjab’ to address the issue of ecological and agricultural sustainability, to the Government of Punjab on 7 October 2011. It is still waiting for response.

## Sustainability

KVM's efforts are sustainable in terms of cost effectiveness, ecological balance, capacity building and human resources. Organic farming is cost effective; it increases the yield rate, provides employment and heightens agricultural productivity while conserving natural resources. KVM's natural farming movement is creating a significant shift in the mindset of farmers making them self-sufficient and reducing their dependence on agricultural universities or departmental experts for agricultural solutions.

Networking with government for the promotion of organic farming will prove to be quite beneficial for KVM's movement and enhance its sustainability in the long run. It is imperative to cite here the examples set by other states such as Andhra Pradesh, Gujarat, Karnataka, Uttaranchal, Maharashtra, Kerala, Nagaland and Sikkim for up scaling such efforts. A similar initiative i.e. **Community Managed Sustainable Agriculture programme [CMSA]** in Andhra Pradesh, has been taken up by the Rural Development Department of the state government. Probably a small team of agriculture department officials and other concerned people from Punjab, including those who could potentially be part of the proposed Institute for Natural and Sustainable Farming can be sent to Andhra Pradesh to learn from this programme.

**The Community Managed Sustainable Agriculture programme [CMSA]** in Andhra Pradesh, up scaled by the Rural Development Department of the state is a large programme for promoting non-chemical, self-reliant farming covering all crops in around 25 lakh acres of the state..The programme is being implemented by women's Self help Groups. The institutional set up consists of one village level activist [who is a practicing farmer, who will also receive additional capacity building inputs and training aids], a cluster coordinator for a cluster of five villages and a district level coordinator of the programme. Further, there is a state level secretariat which plans, reviews and monitors the entire programme and conducts capacity building efforts.

## Potential for Replication

Though KVM is active all over the Punjab; its geographical expansion may further strengthen its network of farmers who are the key partners in taking this movement ahead. Further, networking with gram panchayats, environmental activists, economists, agricultural experts, agricultural universities, social workers and philanthropists across the county may build a strong platform to advocate the issue at policy level.

It is relevant to cite here the work of Morarka Foundation in Rajasthan on organic farming. Morarka Foundation has a wide network of farmers and has also collaborated with many national and international agencies.

Morarka Foundation began the promotion of organic farming in 2005 and achieved reasonable success by developing organic inputs and practices across 10,000 acres of land area in two years .. Their initiative for development of organic inputs as a substitute to chemical inputs laced with technology may be replicated by KVM for further reduction in the cost of cultivation.

Under Morarka Foundation over 250,000 farmers are registered under the IQCS. Over 50,000 of these farmers are also certified by International Certification Agencies like SKAL, IMO, SGS, Eco-Cert, OneCert, etc. as per NPOP-USA, NOP-India, EU-2092/91, etc KVM may also follow adopt a similar internal control system for quality management and certification of organic inputs.

Source: Morarka Foundation Initiatives in Organic Agriculture Development Web: 3 October 2012 <[http://www.morarkango.com/organic\\_agriculture/initiatives.php](http://www.morarkango.com/organic_agriculture/initiatives.php)>

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- There should be a policy frame work to promote organic agriculture/natural farming in India that will enhance production of organic products in the market and generate demand for organic crops.
- Government's involvement should not be limited to the promotion of organic farming/natural farming but also in inspection and certification of organic products. It should also pro actively participate in providing market oriented services to provide equal opportunities to organic farmers.

### **Farmers' perspective:**

- There should be gradual phasing out of subsidy on chemical fertilizers/pesticides in order to enhance the organic agricultural production in the country.
- Financial assistance should be provided to the farmers for converting traditional farms into organic farms
- Agricultural extension services should focus more on organic agriculture in collaboration with agricultural universities, experts and concerned NGOs working at grassroots level.
- Organic farm should be insured to reduce the risk in case of crop failure

### **Institutional networking**

- Various central ministries like Ministry of Agriculture, Ministry of Environment, Ministry of Science and Technology, Ministry of Finance, Ministry of Commerce and Trade may coordinate to promote the issue of organic farming/natural farming. Inter-ministerial committee may be set up for overseeing the effective implementation of policies and programmes meant for the promotion of organic farming.
- Agricultural universities may focus on teaching production oriented traditional practices of agriculture. New subjects may be incorporated in the syllabus with focus on sustainable and organic agriculture with emphasis on environmental impact of agricultural practices.
- In an agricultural state like Punjab, farming should be included in school curriculum to encourage students to continue the heritage of farming and counter problems of rapid industrialization and urbanization

## Conclusion:

Kheti Virasat Mission is successfully promoting sustainable agricultural practices in Punjab. KVM as a civil society movement has brought tremendous changes in the farming culture in Punjab resulting in increased yield rate, enhanced agricultural productivity, active participation of women in agriculture conservation of natural resources and the maintenance of environmental sustainability.

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## Appendix A – Interview Questionnaire

### Background

1. What was the motivation behind KVM's initiative of organic farming?
  - i. Prior to KVM's initiative, what was the basic form of farming in the project areas? What were the challenges being faced under this system of farming?
  - ii. How is KVM's approach to farming different from the hitherto existing agricultural practices?
  - iii. What are the major issues addressed by KVM?
  - iv. Organic farming has been taken up by many Indian states at a substantial level. How have you utilised their learning and experiences?
2. Considering the fact that under the Tenth Five Year Plan, the Government of India had earmarked INR 100 crores for the promotion of organic farming in the country, what is the current status (use, reach, impact) of organic farming in India?
  - i. What are the primary challenges confronting organic farming in India?
3. What implications do organic farming have for ensuring food security in the country?
  - i. Is large scale agricultural production possible with organic farming techniques? In your opinion, does it have the potential to replace traditional methods of farming in the country?
  - ii. On a regular basis, organic farm produce is more expensive than other agricultural products, thereby reducing their overall consumption in a country with India's scale of poverty. Keeping this in view, how effective is the organic farming approach for ensuring food security?
4. Was there a pilot phase of the project? If yes, please provide details- year, purpose, duration, location, finances involved, sources of funding, results, follow-up interventions.
5. What have been and are the current worksites for project implementation? What are the criteria for choosing these sites?

### Programme design

#### *Key stakeholders*

6. Who are the major key stakeholders in the initiative? What are their roles and responsibilities?

#### *Awareness generation and promotional activities*

7. Was a baseline survey conducted to assess the practice or farmers' awareness of organic farming in the region? If yes, what were the key findings of the survey?

8. How are the farmers and other community members made aware of the concept of organic farming?
9. KVM employs an extensive promotional strategy to encourage the use of organic products. What are the primary components of that strategy? How many food festivals have been organized thus far for promoting organic products?

## **Working design**

### ***Action programmes***

10. According to our research, KVM has initiated various action programmes. These include:
  - Natural farming
  - Seeds conservation
  - Chemical free kitchen gardening
  - Inter cropping system
  - Millet based farming system
  - Non-pesticide management

How do these programmes function and who are the major stakeholders in each one of them?

14. Our research indicates that KVM has linkages with farmer schools. Could you provide details of these engagements?

### ***Agricultural extension services***

15. KVM carries out agricultural extension services. What are the objectives and target groups of such interventions?
16. What are the primary components of the agricultural extension programme and what is the methodology being employed for operationalising them? What is the organisational structure in place for this?
17. Is any ICT tool being utilised for agricultural extension?

### ***Research and documentation***

18. KVM has undertaken several surveys in Punjab with reference to the impact of organic farming on environment and health. What is the purpose behind conduction of these surveys? What kind of information does KVM aim to gather through these surveys?
19. What are the criteria for identifying survey locations? How many such surveys have been conducted thus far?
20. Who are the major stakeholders in research and documentation work?

21. How are the findings of these surveys utilised? Do you share the findings at grassroots level with an objective of creating awareness among farmers and other key stakeholders at grassroots level?

### *Advocacy and campaigning*

22. KVM has led number of campaigns against chemical farming. What are the major issues addressed in these campaigns? How many such campaigns have been organised till date?
23. What has been the impact of these campaigns on the policy scenario surrounding organic farming in Punjab? Please provide instances where a campaign has succeeded well and where a campaign has failed to achieve the desired results.
24. What has been the role of KVM in the preparation of the policy brief 'Green Agenda for sustainable development in Punjab'. Which year was this prepared in? What was the objective of its preparation?
25. KVM also publishes a bio-monthly magazine, Bahihari Kudrat, in Punjabi. What is the major objective behind this? What kind of issues does it address?
26. What is the subscription rate?
27. What is the geographical area of its subscription? How many subscribers does the magazine currently have? Could you provide data to indicate an increase in the subscription of the magazine over the years?

### *Training and Capacity Building*

28. For decades, agriculture has relied on the use of chemical fertilisers and pesticides. In view of this, farmers are usually apprehensive of adopting organic farming as a profitable technique of farming owing to doubts about its cost effectiveness, yield rate, government subsidies and labour intensiveness. In this back drop, how does KVM conducts training programmes/workshops/seminars to develop a positive outlook towards organic agriculture? Please provide details of training programmes – number of sessions, geographic locations, resource persons, content, methodology, costs incurred, and following up mechanisms.
29. How does KVM create a pool of local resource persons all around the state? What are the criteria for their selection? What specialised training is provided to them for development as community resource persons? How many such CRPs do you currently have?

### *Monitoring and evaluation*

30. Is there any mechanism in place to monitor the trend and usage of organic farming?

## **Financial costs**

31. What are the primary sources of funding for KVM?
32. What is the overall cost per annum for carrying out the KVM initiative?
33. What is expenditure incurred per component of the project such as action programmes, extension services, promotional activities, advocacy campaigns, and research and documentation?
34. Is it financially beneficial to the farmers? How do you evaluate its cost effectiveness?

## **Impact**

### *Achievements*

35. What have been the most significant achievements of the project?
36. What is the impact of KVM on the agricultural productivity, livelihood opportunities and socio-economic status of farmers? Please provide data to reflect these changes since the time of initiation of organic farming in the project area.
37. How did the farmers and the community members respond to the concept of organic farming in the beginning? Have you been able to see any change in their thought process with respect to organic farming?
38. What is the total number of farmers who have taken up organic farming under the KVM initiative? What is the average socio-economic profile of the farmers using it? Please provide data to reflect change in the impact of KVM over the years.
39. What has been the impact of KVM on women?

### *Challenges*

40. What have been the major challenges prior to and after the implementation of KVM? How were and are these being overcome?
41. Are organic inputs easily available at affordable rates to the farmers? If challenges are faced on this front, what strategies are adopted for overcoming them?
42. Has KVM faced any resistance from pesticides/chemical fertilizers manufacturers for encouraging use of organic products?
43. Are you able to convince the farmers about benefits of the organic farming? Is switching over from chemical to organic farming a smooth process? What have been the main challenges in this regard and how are these overcome?

### *Sustainability*

44. Is KVM a sustainable initiative? Why?

### *Enhancements*

45. Are there any enhancements in the planning phase for inclusion in the project?
46. How do you intend to expand the scope of the mission?
47. Has KVM been contacted by any government entities for upscaling or replication of the approach?